

**Abstract**

In connection with transmitted space-time, trellis encoded, signals that pass through a transmission channel that is characterized by memory, improved performance is realized with a receiver that combines a decoder with an equalizer that selects the

5 trellis transition,  $s$ , that minimizes the metric

$$\xi_j(k) = \left| r(k) - \sum_{l=L_1+1}^{L_1} \tilde{h}_j(l) \tilde{s}(k-l) - \sum_{l=L_1+1}^{L+1} \tilde{h}_j(l) \hat{s}(k-l) \right|^2$$

where  $\tilde{h}_j(l)$  is related to both the transmission channel and to the encoding structure in the transmitter,  $\tilde{s}(k)$  are the (trial) symbols according to a certain transition and  $\hat{s}(k)$  are the symbols that were previously decided.